

REMARKS

The Office Action mailed May 19, 2003 has been received and carefully considered.

Upon entry of the amendments, claims 1-10, 12-14 and 25 will be pending. Claims 15-24 are withdrawn. Claims 1-6 and 8-14 stand rejected. The Examiner has indicated that claim 7 contains patentable subject matter for which Applicants thank the Examiner.

Applicants note that the Examiner references 26 claims as pending in the Application, although Applicants also note that only 24 claims were originally filed. Applicants appreciate confirmation from the Examiner that, prior to this amendment, only claims 1-24 were pending in the Application.

Claims 11-14 stand rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by U.S. Patent No. 5,536,157 to Linz (“Linz”) and by DE 19800636 C1 to Kägi et al. (“Kägi”).

Claims 1-4, 6, and 8-10 stand rejected under 35 U.S.C. § 103(a) as allegedly obvious over Linz in view of any one of U.S. Patent Nos. 5,612,063 to Schilo et al. (“Schilo”), 4,687,610 to Vassilatos (“Vassilatos”), or 4,156,071 to Knox (“Knox”). Claim 5 is rejected under 35 U.S.C. § 103(a) as obvious over Linz in view of any of Vassilatos, Schilo, or Knox and further in view of U.S. Patent No. 4,756,679 to Stibal et al. (“Stibal”) or JP 10-77522 to Kyocera Corp (“Kyocera”). Applicants respectfully traverse these rejections.

I. Restriction Requirement

Examiner Tentoni telephoned Applicants’ undersigned representative, Charles E. Kruckiel, on May 5, 2003 and asserted that the Application contained claims drawn to three groups of claims representing three distinct inventions. Examiner Tentoni then required the election of a single group of claims for prosecution. The claims, as grouped by Examiner Tentoni, appear as follows:

I. Claims 1-14, drawn to a melt spinning apparatus, classified in class 425, subclass 104.

II. Claims 15-22, drawn to a melt spinning process, classified in class 264, subclass 130.

III. Claims 23-26, drawn to filaments/yarn, classified in class 428, subclass 364.

Applicants provisionally elected, with traverse, the claims of Group I for further prosecution. Applicants affirm this election, but set forth the basis for traversal below.

In the Office Action it was asserted that inventions in the above-identified groups were distinct for several reasons:

First, it was asserted that Group I and Group II are related as process and apparatus for its practice and that the process as claimed can be practiced by another materially different apparatus, such as an apparatus including a finish applicator comprising a tapered roller and a finish bath.

It was further asserted that Group I and Group III are related as apparatus and product made and that the product as claimed can be made by an apparatus including a finish application comprising a tapered roller and a finish bath.

Lastly, it was asserted that the claims of Group II and Group III, are related as process of making and product made and that the product as claimed can be made by a process including the steps of extruding a film, longitudinally slitting the film to form fibers and applying finish to the fibers.

Applicants note that under the patent statute, 35 U.S.C. § 121, an application may be properly required to be restricted to one of two or more claimed inventions, only if they are able to support separate patents and they are either independent or distinct. 37 C.F.R. § 1.141; MPEP

§ 803. However, if the search and examination of an entire application can be made without serious burden, then the examiner must examine it all on the merits, even if it includes claims to distinct or independent inventions. MPEP § 803.

Applicants submit that the claims of the designated groups have not necessarily acquired a separate status in the art for examination purposes, notwithstanding possible different art classifications which may have been artificially assigned thereto in the Patent Office. Art very relevant to the patentability of one group might logically be found in the art classes assigned to one of all of the other claim groups. The classification cited in support of the election requirement is merely used for cataloging purposes and is not conclusive of the propriety of such a requirement.

Applicants respectfully request that the Examiner reconsider the Requirement for Restriction in light of the foregoing remarks and that all of claims 1-25 be examined in the same application.

II. Amendments to the Claims

Claims 1 and 2 were objected to because of an informality which has been corrected by separating the end of claim 1 and beginning of claim 2 onto separate lines.

Claim 11 is canceled without prejudice.

Claims 12-14 have been amended to depend from claim 10 and to put the claims in better form to recite literal antecedent basis with respect to claim 10. Applicants in no way intend to narrow the scope of these claims such as to give up or dedicate to the public any subject matter previously covered by the claims or equivalents of the same or for these amendments to be construed as limiting in any sense.

Claim 25 has been added and is directed to a melt spinning apparatus. In the event that the Restriction Requirement is upheld by the Examiner, Applicants respectfully submit that claim 25 should be properly examined with the rest of the claims of Group I.

Support for the new and amended claims can be found throughout the specification as originally filed and the new and amended claims present no new matter.

III. Rejection under 35 U.S.C. § 102(b) by Linz and Kägi

Claims 11-14 stand rejected as assertedly anticipated by Linz and Kägi. Linz discloses an apparatus for cooling, stabilizing and preparing melt-spun filaments including a spinneret assembly for producing an annular bundle of filaments; a blowing air dispensing device downstream of the spinneret assembly and centrally located in the annular bundle for cooling the melt-spun filaments; a hollow, air-conducting preparation application device located centrally in the annular bundle and down-stream of the blowing air dispensing device; a radially closed hollow cylindrical tube having open ends and connecting the blowing air dispensing device and the preparation application device to conduct air flowing through the preparation application device to the blowing air dispensing device. Kägi discloses a quench device that provides quench air to a circular thread bundle from a blowing candle arranged in the center of the thread bundle.

Applicants submit that this rejection is obviated in light of the cancellation of claim 11, and respectfully request that this rejection be withdrawn.

IV. Rejection under 35 U.S.C. 103(a)

A. Claims 1-4, 6 and 8-10

Claims 1-4, 6, and 8-10 stand rejected as obvious over Linz in view of any one of Vassilatos, Schilo or Knox. Applicants respectfully traverse this rejection.

As stated by the Federal Circuit, “a proper analysis under 35 U.S.C. § 103 requires, *inter alia*, consideration of two factors: (1) whether the prior art would have suggested to those of ordinary skill in the art that they should make the claimed composition or device, or carry out the claimed process; and (2) whether the prior art would also have revealed that in so making or carrying out, those of ordinary skill would have a reasonable expectation of success.” *In re Vaeck*, 947 F.2d 488, 493 (Fed. Cir. 1991). In addition, the prior art reference(s) must teach or suggest all of the claim limitations. The teaching or suggestion to combine and the reasonable expectation of success must both be found in the prior art, and not in Applicants’ disclosure. *Id* at 493. *See also* MPEP § 2142.

Linz does not teach, disclose, or suggest Applicants’ claimed melt spinning apparatuses of claims 1-4, 6, 8 or 10. The melt spinning apparatus of Linz is specifically designed to quench filaments by blowing air radially outward toward the fibers. Conversely, the quench zone in Applicants’ claimed invention receives an array of molten filaments which are cooled by a cooling gas passed inward to the array of filaments.

The Examiner cites Vassilatos, Knox, and Schilo all for the proposition that blowing cooling air inward to quench moving filaments is known in the art. Vassilatos discloses a gas management technique to manage gas surrounding a threadline to control the temperature and attenuation profiles of the spinning threadline. A pressurized gas is directed into a zone enclosing the path of extruded filament from a spinneret. Filaments are withdrawn from the spinneret in a path by a withdrawal roll. There is no disclosure in Vassilatos of a finish applicator to apply a finishing liquid to the extruded filament. *See* col. 1, lines 63-65; col. 2, lines 18-42; Abstract.

Knox discloses new poly(ethylene terephthalate) flat yarns and tows. The process to produce these flat yarns and tows includes spinning molten polyester through orifices in a heated spinneret, introducing cooling air into a cooling zone and applying spin finish to the filaments by way of rolls which rotate in a bath of spin finish. *See* col. 13, lines 49-65. Schilo discloses an apparatus for melt spinning multifilament fiber yarns from fiber-forming polymers. *See* Abstract. The filaments are cooled by cooling air aspirated through a porous tube by the high speed of the filaments. *See* col. 3, lines 38-40. The yarns pass through a convergence element and an optional air-jet entangler. *See* col. 2, lines 52-53. There is no disclosure in Schilo of the application of finishing liquid to the filament.

There is no suggestion in any of the references that the apparatus of Linz, which uses an outward directed cooling gas located in the center of the filament bundle to cool the filament, be combined with a system that uses inward directed cooling air to cool the filament. Similarly, one of ordinary skill in the art would not be motivated to combine the apparatus of Linz designed for an outward directed cooling gas, with any of the systems or apparatuses of Vassilatos, Knox or Schilo. The presence of both an inward directed cooling gas and an outward directed cooling gas would be expected to be detrimental to the operation of the Applicants' claimed melt spinning apparatus, thus there would be no reasonable expectation of success.

The apparatus of Linz already provides for air to cool the filaments by the blowing air dispensing means. *See* Linz, col. 5, lines 57-62. Thus one would not be motivated to also pass cooling gas inward toward the filament array because the purpose for which that cooling gas would be used, cooling the filaments, has already been accomplished by the outward blowing cooling gas of Linz. In fact, blowing cooling gas in both directions would be undesirable as it would be believed to counteract the air flow in each direction. By directing gas both inwardly

and outwardly at the same time, either the inward directed gas, the outward directed gas (or both) would not effectively reach the fibers because it would be impeded by air flowing in the opposite direction. In addition, greater air turbulence would be expected within the filament array due to the increased flow of air into the array, which turbulence is not desirable. *See* Specification at p. 2, lines 5-8. Such an effect would also not lead one of ordinary skill in the art to have a reasonable expectation of success by combining an apparatus having both an inward and an outward flow of cooling gas for the filament array.

Similarly, one would not be motivated to pass cooling gas inward using the disclosure of Vassilatos, Knox or Schilo in the apparatus disclosed by Linz. The only reasonable purpose for the blowing air dispensing means and radially closed tube of Linz is to blow air outward. One would not look to an apparatus that is designed to work in a fashion that is exactly opposite as desired and then modify that apparatus to make it work in contravention of its original design without some suggestion in the art to do so. No such suggestion is found in Linz, nor is it found in any of the other references cited by the Examiner.

A modification of Linz's disclosure with an apparatus that inwardly directs cooling gas to arrive at Applicants' claimed invention could only have been made with the benefit of hindsight provided by Applicants' own invention. The use of hindsight in patentability analysis is erroneous as a matter of law. *See In re Dance*, 48 U.S.P.Q.2d 1635 (Fed. Cir. 1998).

B. Claim 5

Claim 5 has been rejected as allegedly obvious under 35 U.S.C. § 103(a) over Linz in view of any of Vassilatos, Schilo or Knox, and further in view of either of Stibal or Kyocera. Stibal has been cited as teaching a filament detector coated with ceramic for the purpose of avoiding the tendency of filaments to adhere to the apparatus. *See* Office Action at p. 9, ¶ 18.

Kyocera has been cited as teaching finish applicator made of ceramic for the purpose of reducing sliding friction. *Id.*

Stibal discloses a nozzle plate adapted to permit a melt to flow through to form a stream of filaments. *See Abstract.* Stibal discloses a cooling gas flowing outwardly from the interior of the filament bundle. *See col. 4, lines 22-37.* Stibal does not disclose the finish applicator of the claimed invention. Kyocera discloses a ceramic oiling nozzle finish applicator for reducing friction. This finish applicator does not disclose the finish applicator of the claimed invention. Kyocera does not disclose a cooling system for cooling melt-spun filaments.

It would not have been obvious to combine Linz with any of Vassilatos, Knox and Schilo, and either of Stibal and Kyocera, to achieve the claimed invention. As discussed, Linz in combination with any of Vassilatos, Schilo or Knox, do not establish a *prima facie* case of obviousness because none of these references teaches or suggests that one of ordinary skill in the art would combine the inward blowing cooling gas apparatus of Vassilatos, Schilo or Knox with the outward blowing cooling gas apparatus of Linz. Since Stibal discloses an outward flowing cooling gas apparatus, and Kyocera does not disclose a cooling gas at all, neither of these references discloses the melt-spinning apparatus of claim 1, much less such a spinning apparatus with the finish applicator defined in claim 5, and an inward directed cooling gas.

Since a *prima facie* case of obviousness has not been established by these references, Applicants respectfully request that this rejection be withdrawn.

Conclusion

For at least the reasons stated above, claims 1-10, 12-14, and 25 are in condition for allowance. Accordingly, Applicants respectfully request that the Application be allowed and passed to issue.

In the event any outstanding issues remain, Applicants would appreciate the courtesy of a telephone call to Applicants' undersigned representative to resolve such issues in an expeditious manner.

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Respectfully submitted,

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